

# INDEX

## A

Accountant's Report .....	5
<b>Air Conditioning a Canadian Windowless Textile Mill</b> , by G. LORNE WIGGS ..	261
Discussion .....	270
Airplanes, Heating and Ventilating for Transport, by B. M. BROD .....	131
Discussion .....	143
ALLEN, FREDERICK M., M.D., Therapeutic Uses of Low Temperature .....	123
Discussion .....	129
Aluminum Paper on Internal Thermal Conditions and Heat Economy, The Influence of an Interior Coating of, by R. J. LORENZI, L. P. HERRINGTON, and C.-E. A. WINSLOW .....	339
Discussion .....	351
Amendments to Constitution and By-Laws .....	30
<b>An Experimental Investigation of the Effect of Change in Atmospheric Conditions and Noise Upon Performance</b> , by MORRIS S. VITELES and KINSLEY R. SMITH .....	167
Discussion .....	180
<b>Annual Meeting, 1946, Fifty-Second</b> , (New York, N. Y.) .....	1
<b>Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses</b> , The, by ORION O. OAKS .....	65
Discussion .....	74
ASHLEY, C. M., Discussions on Effect of Turbulence Promoters on Heat Transfer Coefficients for Water Flowing in Horizontal Tubes .....	204
Periodic Heat Flow—Composite Walls or Roofs .....	294
Shielding of Thermocouples from the Effects of Radiation .....	189
Sol-Air Thermometer—A New Instrument .....	281
Atmospheric Conditions and Noise Upon Performance, An Experimental Investigation of the Effect of Change in, by MORRIS S. VITELES and KINSLEY R. SMITH .....	167
Discussion .....	180
AVERY, L. T., Discussions on Air Conditioning a Canadian Windowless Textile Mill .....	270
Characteristics of Unit Dust Collectors .....	259
Physiological Response of Subjects Exposed to High Effective Temperature and Elevated Mean Radiant Temperatures .....	165
Sol-Air Thermometer—A New Instrument .....	281

## B

BAKER, R. A., Discussion on Hold-Fire Controls for Bituminous Coal Stokers ..	338
BALIFF, JACK, ARTHUR E. PERINA, ROBERT CROWLEY, BENJAMIN FEINER, ARTHUR A. URBANO, and ARTHUR C. STERN, Characteristics of Unit Dust Collectors ..	237
Discussion .....	257
BAND, J. P., Discussion on An Experimental Investigation of the Effect of Change in Atmospheric Conditions and Noise Upon Performance .....	181
BAUMANN, H. A., C. C. WRIGHT, and T. S. SPICER, Hold-Fire Controls for Bituminous Coal Stokers .....	325
Discussion .....	337

Bituminous Coal Stokers, Hold-Fire Controls for, by C. C. WRIGHT, T. S. SPICER, and H. A. BAUMANN .....	325
Discussion .....	337
Branch Take-Off Design on Noise in Ventilating Duct Systems, Effect of, by OSCAR IMALIS, F. C. HOUGHTEN, and CLARK M. HUMPHREYS .....	145
Discussion .....	151
BRANDT, A. D., Discussion on Characteristics of Unit Dust Collectors .....	258
BRANDT, ALLEN D., Energy Losses at Suction Hoods .....	205
Discussion .....	229
BRINEN, H. F., Discussion on The Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses .....	75
BROD, B. M., Discussions on An Experimental Investigation of the Effect of Change in Atmospheric Conditions and Noise Upon Performance .....	180
Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses .....	75
Effect of Branch Take-Off Design on Noise in Ventilating Duct Systems .....	151
BROD, B. M., Heating and Ventilating for Transport Airplanes .....	131
Discussion .....	143

## C

Canadian Windowless Textile Mill, Air Conditioning a, by G. LORNE WIGGS ...	261
Discussion .....	270
CARBONE, J. H., Discussion on Heating and Ventilating for Transport Airplanes .....	143
CARRIER, W. H., Discussions on Characteristics of Unit Dust Collectors .....	259
Heat Losses Through Wetted Walls .....	304
Hold-Fire Controls for Bituminous Coal Stokers .....	338
Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy .....	351
Change in Purposes, Powers and Other Provisions and Increase in Number of Directors .....	18
CHAPMAN, W. P., and F. W. HUTCHINSON, A Rational Basis for Solar Heating Analysis .....	305
Discussion .....	323
<b>Characteristics of Unit Dust Collectors, by ARTHUR C. STERN, JACK BALIFF, ARTHUR E. PERINA, ROBERT CROWLEY, BENJAMIN FEINER, and ARTHUR A. URBANO</b> .....	237
Discussion .....	257
Coal-Fired Magazine-Feed Space Heaters, A Study of Several, by R. C. CROSS and H. N. OSTBORG .....	47
Discussion .....	64
Coal Stokers, Hold-Fire Controls for Bituminous, by C. C. WRIGHT, T. S. SPICER, and H. A. BAUMANN .....	325
Discussion .....	337
Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy, The Influence of an Interior, by R. J. LORENZI, L. P. HERRINGTON, and C.-E. A. WINSLOW .....	339
Discussion .....	351
Coefficients for Water Flowing in Horizontal Tubes, The Effect of Turbulence Promoters on Heat Transfer, by LAWRENCE G. SEIGEL .....	197
Discussion .....	204
Collectors, Characteristics of Unit Dust, by ARTHUR C. STERN, JACK BALIFF, ARTHUR E. PERINA, ROBERT CROWLEY, BENJAMIN FEINER, and ARTHUR A. URBANO .....	237
Discussion .....	257
Committee on Arrangements (52nd Annual Meeting) .....	46
Committee on Research Annual Report, 1945 .....	33
Conditioning a Canadian Windowless Textile Mill, Air, by G. LORNE WIGGS ..	261
Discussion .....	270
Controls for Bituminous Coal Stokers, Hold-Fire, by C. C. WRIGHT, T. S. SPICER, and H. A. BAUMANN .....	325
Discussion .....	337

Council, Report of .....	3
CROSS, R. C., and H. N. OSTBORG, A Study of Several Coal-Fired Magazine-Feed Space Heaters .....	47
Discussion .....	64
CROWLEY, ROBERT, BENJAMIN FEINER, ARTHUR A. URBANO, ARTHUR C. STERN, JACK BALIFF, and ARTHUR E. PERINA, Characteristics of Unit Dust Collectors .....	237
Discussion .....	257

**D**

DANIELSON, W. A., Discussions on A Rational Basis for Solar Heating Analysis .....	323
Hold-Fire Controls for Bituminous Coal Stokers .....	338
Design on Noise in Ventilating Duct Systems, Effect of Branch Take-Off, by OSCAR IMALIS, F. C. HOUGHTEN, and CLARK M. HUMPHREYS .....	145
Discussion .....	151
Design Procedure for Radiant Panel Systems, A Single-Equation, by F. W. HUTCHINSON .....	77
Discussion .....	88
DILL, R. S., Discussions on Air Conditioning a Canadian Windowless Textile Mill .....	270
Characteristics of Unit Dust Collectors .....	259
Sol-Air Thermometer—A New Instrument .....	282
Domestic and Industrial Uses, The Application of High Temperature Liquid as a Heat or Energy Transfer Medium for, by ORION O. OAKS .....	65
Discussion .....	74
Downs, S. H., Discussion on Characteristics of Unit Dust Collectors .....	259
Duct Systems, Effect of Branch Take-Off Design on Noise in Ventilating, by OSCAR IMALIS, F. C. HOUGHTEN, and CLARK M. HUMPHREYS .....	145
Discussion .....	151
Dust Collectors, Characteristics of Unit, by ARTHUR C. STERN, JACK BALIFF, ARTHUR E. PERINA, ROBERT CROWLEY, BENJAMIN FEINER, and ARTHUR A. URBANO .....	237
Discussion .....	257

**E**

Effect of Branch Take-Off Design on Noise in Ventilating Duct Systems, by OSCAR IMALIS, F. C. HOUGHTEN, and CLARK M. HUMPHREYS .....	145
Discussion .....	151
Effect of Change in Atmospheric Conditions and Noise Upon Performance, An Experimental Investigation of the, by MORRIS S. VITELES and KINSLEY R. SMITH .....	167
Discussion .....	180
Effect of Turbulence Promoters on Heat Transfer Coefficients for Water Flowing in Horizontal Tubes, The, by LAWRENCE G. SEIGEL .....	197
Discussion .....	204
Effective Temperatures and Elevated Mean Radiant Temperatures, Physiological Response of Subjects Exposed to High, by CLARK M. HUMPHREYS, OSCAR IMALIS, and CARL GUTBERLET .....	153
Discussion .....	164
Energy Losses at Suction Hoods, by ALLEN D. BRANDT .....	205
Discussion .....	229
Experimental Investigation of the Effect of Change in Atmospheric Conditions and Noise Upon Performance, An, by MORRIS S. VITELES and KINSLEY R. SMITH .....	167
Discussion .....	180

**F**

FAHNESTOCK, M. K., Discussion on The Shielding of Thermocouples from the Effects of Radiation .....	189
FAKTOR, MEYER, Discussions on Effect of Branch Take-Off Design on Noise in Ventilating Duct Systems .....	151
Heating and Ventilating for Transport Airplanes .....	143

FARR, R. S., Discussion on Characteristics of Unit Dust Collectors .....	258
FEINER, BENJAMIN, ARTHUR A. URBANO, ARTHUR C. STERN, JACK BALIFF, ARTHUR E. PERINA, and ROBERT CROWLEY, Characteristics of Unit Dust Collectors .....	237
Discussion .....	257
<b>Fifty-Second Annual Meeting, 1946, (New York, N. Y.) .....</b>	<b>1</b>
FLEISHER, W. L., Discussions on A Single-Equation Design Procedure for Radiant Panel Systems .....	91
An Experimental Investigation of the Effect of Change in Atmospheric Con- ditions and Noise Upon Performance .....	180
Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures .....	164

## G

GAREY, L. L., Discussion on The Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses .....	75
GOFF, JOHN A., and S. GRATCH, Low-Pressure Properties of Water from -160 to 212 F .....	95
Discussion .....	121
GRATCH, S., and JOHN A. GOFF, Low-Pressure Properties of Water from -160 to 212 F .....	95
Discussion .....	121
GREEN, P. A., Discussion on The Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses .....	74
GUTBERLET, CARL, CLARK M. HUMPHREYS, and OSCAR IMALIS, Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures .....	153
Discussion .....	164

## H

HAND, I. F., Discussion on The Sol-Air Thermometer—A New Instrument .....	280
Heat Economy, The Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and, by R. J. LORENZI, L. P. HERRINGTON, and C.-E. A. WINSLOW .....	339
Discussion .....	351
Heat Flow—Composite Walls or Roofs, Periodic, by C. O. MACKEY and L. T. WRIGHT, JR. ....	283
Discussion .....	293
<b>Heat Losses Through Wetted Walls, by E. C. WILLEY .....</b>	<b>297</b>
Discussion .....	304
Heat or Energy Transfer Medium for Domestic and Industrial Uses, The Appli- cation of High Temperature Liquid as a, by ORION O. OAKS .....	65
Discussion .....	74
Heat Transfer Coefficients for Water Flowing in Horizontal Tubes, The Effect of Turbulence Promoters on, by LAWRENCE G. SEIGEL .....	197
Discussion .....	204
Heaters, A Study of Several Coal-Fired Magazine-Feed Space, by R. C. CROSS and H. N. ØSTBORG .....	47
Discussion .....	64
HEATE, W. R., Discussion on The Effect of Turbulence Promoters on Heat Transfer Coefficients for Water Flowing in Horizontal Tubes .....	204
Heating Analysis, A Rational Basis for Solar, by F. W. HUTCHINSON and W. P. CHAPMAN .....	305
Discussion .....	323
<b>Heating and Ventilating for Transport Airplanes, by B. M. BROD .....</b>	<b>131</b>
Discussion .....	143
HEIBEL, W. E., Discussion on A Rational Basis for Solar Heating Analysis .....	323
HEMEON, W. C. L., Discussion on Energy Losses at Suction Hoods .....	229

HERRINGTON, L. P., C.-E. A. WINSLOW, and R. J. LORENZI, The Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy .....	339
Discussion .....	351
<b>Hold-Fire Controls for Bituminous Coal Stokers</b> , by C. C. WRIGHT, T. S. SPICER, and H. A. BAUMANN .....	325
Discussion .....	337
Hoods, Energy Losses at Suction, by ALLEN D. BRANDT .....	205
Discussion .....	229
HOUGHTEN, F. C., CLARK M. HUMPHREYS, and OSCAR IMALIS, Effect of Branch Take-Off Design on Noise in Ventilating Duct Systems .....	145
Discussion .....	151
HUEBSCHER, RICHARD G., and GEORGE V. PARMELEE, The Shielding of Thermocouples from the Effects of Radiation .....	183
Discussion .....	188
HUMPHREYS, CLARK M., OSCAR IMALIS, and CARL GUTBERLET, Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures .....	153
Discussion .....	164
HUMPHREYS, CLARK M., OSCAR IMALIS, and F. C. HOUGHTEN, Effect of Branch Take-Off Design on Noise in Ventilating Duct Systems .....	145
Discussion .....	151
HUTCHINSON, F. W., and W. P. CHAPMAN, A Rational Basis for Solar Heating Analysis .....	305
Discussion .....	323
HUTCHINSON, F. W., A Single-Equation Design Procedure for Radiant Panel Systems .....	77
Discussion .....	88
HUTCHINSON, F. W., Discussions on Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures ..	165
Shielding of Thermocouples from the Effects of Radiation .....	189
HYNES, L. P., Discussion on a Rational Basis for Solar Heating Analysis .....	323

# I

IMALIS, OSCAR, Discussion on The Shielding of Thermocouples from the Effects of Radiation .....	189
IMALIS, OSCAR, F. C. HOUGHTEN and CLARK M. HUMPHREYS, Effect of Branch Take-Off Design on Noise in Ventilating Duct Systems .....	145
Discussion .....	151
IMALIS, OSCAR, CARL GUTBERLET, and CLARK M. HUMPHREYS, Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures .....	153
Discussion .....	164
<b>Index</b> .....	355
Industrial Uses, The Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and, by ORION O. OAKS .....	65
Discussion .....	74
<b>Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy</b> , The, by R. J. LORENZI, L. P. HERRINGTON, and C.-E. A. WINSLOW .....	339
Discussion .....	351
<b>In Memoriam, 1946</b> .....	353
Installation of Officers for 1946 .....	43
Instrument, The Sol-Air Thermometer—A New, by C. O. MACKEY and L. T. WRIGHT, JR. ....	271
Discussion .....	280
Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy, The Influence of an, by R. J. LORENZI, L. P. HERRINGTON, and C.-E. A. WINSLOW .....	339
Discussion .....	351

**K**

KANE, J. M., Discussion on Characteristics of Unit Dust Collectors .....	257
KAYAN, C. F., Discussions on A Rational Basis for Solar Heating Analysis ....	323
Sol-Air Thermometer—A New Instrument .....	281

**L**

LEOPOLD, C. S., Discussions on A Single-Equation Design Procedure for Radiant Panel Systems .....	92
An Experimental Investigation of the Effect of Change in Atmospheric Conditions and Noise Upon Performance .....	180
Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses, The Application of High Temperature, by ORION O. OAKS .....	65
Discussion .....	74
LIVERMORE, J. N., Discussions on Energy Losses at Suction Hoods .....	235
Sol-Air Thermometer—A New Instrument .....	281
LORENZI, R. J., L. P. HERRINGTON, and C.-E. A. WINSLOW, The Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy .....	339
Discussion .....	351
Losses at Suction Hoods, Energy, by ALLEN D. BRANDT .....	205
Discussion .....	229
Losses Through Wetted Walls, Heat, by E. C. WILLEY .....	297
Discussion .....	304
Low-Pressure Properties of Water from —160 to 212 F, by JOHN A. GOFF and S. GRATCH .....	95
Discussion .....	121
Low Temperature, Therapeutic Uses of, by FREDERICK M. ALLEN, M.D. ....	123
Discussion .....	129

**M**

MACKEY, C. O., and L. T. WRIGHT, JR., Periodic Heat Flow—Composite Walls or Roofs .....	283
Discussion .....	293
MACKEY, C. O., and L. T. WRIGHT, JR., The Sol-Air Thermometer—A New Instrument .....	271
Discussion .....	280
MACKEY, C. O., Discussion on A Rational Basis for Solar Heating Analysis....	323
Magazine-Feed Space Heaters, A Study of Several Coal-Fired, by R. C. CROSS and H. N. OSTBORG .....	47
Discussion .....	64
Mill, Air Conditioning a Canadian Windowless Textile, by G. LORNE WIGGS ....	261
Discussion .....	270
MILLER, J. W., Discussion on The Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy .....	351
MURRAY, W. N., Discussion on Low-Pressure Properties of Water from —160 to 212 F .....	121

**N**

NOBIS, H. M., Discussion on The Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses .....	75
Noise in Ventilating Duct Systems, Effect of Branch Take-Off Design on, by OSCAR IMALIS, F. C. HOUGHTEN, and CLARK M. HUMPHREYS .....	145
Discussion .....	151
Noise Upon Performance, An Experimental Investigation of the Effect of Change in Atmospheric Conditions and, by MORRIS S. VITELES and KINSLEY R. SMITH .....	167
Discussion .....	180



## O

OAKS, ORION O., The Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses .....	65
Discussion .....	74
OSTBORG, H. N., and R. C. CROSS, A Study of Several Coal-Fired Magazine-Feed Space Heaters .....	47
Discussion .....	64

## P

Panel Systems, A Single-Equation Design Procedure for Radiant, by F. W. HUTCHINSON .....	77
Discussion .....	88
Paper on Internal Thermal Conditions and Heat Economy, The Influence of an Interior Coating of Aluminum, by R. J. LORENZI, L. P. HERRINGTON, and C.-E. A. WINSLOW .....	339
Discussion .....	351
PARMELEE, GEORGE V., and RICHARD G. HUEBSCHER, The Shielding of Thermocouples from the Effects of Radiation .....	183
Discussion .....	188
Participating in 1945 Research Program .....	41
PERINA, ARTHUR E., ROBERT CROWLEY, BENJAMIN FEINER, ARTHUR A. URBANO, ARTHUR C. STERN, and JACK BALIFF, Characteristics of Unit Dust Collectors .....	237
Discussion .....	257
Periodic Heat Flow—Composite Walls or Roofs, by C. O. MACKEY and L. T. WRIGHT, JR. ....	283
Discussion .....	293
Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures, by CLARK M. HUMPHREYS, OSCAR IMALIS, and CARL GUTBERLET .....	153
Discussion .....	164
POSTMAN, B. F., Discussion on Energy Losses at Suction Hoods .....	232
President's Report (Dr. C.-E. A. WINSLOW) .....	1
Program, 52nd Annual Meeting, 1946, (New York, N. Y.) .....	44
Program, Semi-Annual Meeting, 1946, (Montreal, Que., Canada) .....	195
Properties of Water from -160 to 212 F, Low-Pressure, by JOHN A. GOFF and S. GRATCH .....	95
Discussion .....	121
Proposed Amendment to Article B-VIII, Section 11 .....	28

## R

Radiant Panel Systems, A Single-Equation Design Procedure for, by F. W. HUTCHINSON .....	77
Discussion .....	88
Radiant Temperatures, Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean, by CLARK M. HUMPHREYS, OSCAR IMALIS, and CARL GUTBERLET .....	153
Discussion .....	164
Radiation, The Shielding of Thermocouples from the Effects of, by GEORGE V. PARMELEE and RICHARD G. HUEBSCHER .....	183
Discussion .....	188
Rational Basis for Solar Heating Analysis, A, by F. W. HUTCHINSON and W. P. CHAPMAN .....	305
Discussion .....	323
REAS, R. F., Discussion on An Experimental Investigation of the Effect of Change in Atmospheric Conditions and Noise Upon Performance .....	181
Report of Director of Research (Cyril Tasker) .....	34
Research, Annual Report, 1945, Committee on .....	33

Resolutions (52nd Annual Meeting) .....	43
Roofs, Periodic Heat Flow—Composite Walls or, by C. O. MACKEY and L. T. WRIGHT, JR. ....	283
Discussion .....	293
RYAN, H. J., Discussion on The Effect of Turbulence Promoters on Heat Transfer Coefficients for Water Flowing in Horizontal Tubes .....	204

## S

SAUNDERS, L. P., Discussion on A Single-Equation Design Procedure for Radiant Panel Systems .....	91
Secretary's Report (A. V. HUTCHINSON) .....	4
SEELEY, L. E., Discussion on The Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy .....	351
SEIGEL, LAWRENCE G., The Effect of Turbulence Promoters on Heat Transfer Coefficients for Water Flowing in Horizontal Tubes .....	197
Discussion .....	204
<b>Semi-Annual Meeting, 1946, (Montreal, Que., Canada)</b> .....	191
SHERMAN, R. A., Discussion on Hold-Fire Controls for Bituminous Coal Stokers .....	337
<b>Shielding of Thermocouples from the Effects of Radiation, The, by GEORGE V. PARMELEE and RICHARD G. HUEBSCHER</b> .....	183
Discussion .....	188
SILVERMAN, LESLIE, Discussion on Energy Losses at Suction Hoods .....	233
<b>Single-Equation Design Procedure for Radiant Panel Systems, A, by F. W. HUTCHINSON</b> .....	77
Discussion .....	88
SMITH, KINSLEY R., and MORRIS S. VITELES, An Experimental Investigation of the Effect of Change in Atmospheric Conditions and Noise Upon Performance .....	167
Discussion .....	180
SMITH, S. K., Discussion on A Study of Several Coal-Fired Magazine-Feed Space Heaters .....	64
<b>Sol-Air Thermometer—A New Instrument, The, by C. O. MACKEY and L. T. WRIGHT, JR.</b> .....	271
Discussion .....	280
Solar Heating Analysis, A Rational Basis for, by F. W. HUTCHINSON and W. P. CHAPMAN .....	305
Discussion .....	323
Space Heaters, A Study of Several Coal-Fired Magazine-Feed, by R. C. CROSS and H. N. OSTBORG .....	47
Discussion .....	64
SPICER, T. S., H. A. BAUMANN, and C. C. WRIGHT, Hold-Fire Controls for Bituminous Coal Stokers .....	325
Discussion .....	337
STERN, A. C., Discussion on Energy Losses at Suction Hoods .....	235
STERN, ARTHUR C., JACK BALIFF, ARTHUR E. PERINA, ROBERT CROWLEY, BENJAMIN FEINER, and ARTHUR A. URBANO, Characteristics of Unit Dust Collectors .....	237
Discussion .....	257
Statement of Research Income and Expenses .....	40
STINARD, R. L., Discussion on The Application of High Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses .....	75
Stokers, Hold-Fire Controls for Bituminous Coal, by C. C. WRIGHT, T. S. SPICER, and H. A. BAUMANN .....	325
Discussion .....	337
<b>Study of Several Coal-Fired Magazine-Feed Space Heaters, A, by R. C. CROSS and H. N. OSTBORG</b> .....	47
Discussion .....	64
Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures, Physiological Response of, by CLARK M. HUMPHREYS, OSCAR IMALIS, and CARL GUTBERLET .....	153
Discussion .....	164



## T

TASKER, CYRIL, Discussions on Air Conditioning a Canadian Windowless Textile Mill .....	270
Characteristics of Unit Dust Collectors .....	258
Effect of Branch Take-Off Design on Noise in Ventilating Duct Systems .....	152
Heat Losses Through Wetted Walls .....	304
Periodic Heat Flow—Composite Walls or Roofs .....	293
Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures .....	165
Shielding of Thermocouples from the Effects of Radiation .....	190
Temperature Liquid as a Heat or Energy Transfer Medium for Domestic and Industrial Uses, The Application of High, by ORION O. OAKS .....	65
Discussion .....	74
Temperature, Therapeutic Uses of Low, by FREDERICK M. ALLEN, M.D. ....	123
Discussion .....	129
Temperatures and Elevated Mean Radiant Temperatures, Physiological Response of Subjects Exposed to High Effective, by CLARK M. HUMPHREYS, OSCAR IMALIS, and CARL GUTBERLET .....	153
Discussion .....	164
Textile Mill, Air Conditioning a Canadian Windowless, by G. LORNE WIGGS .....	261
Discussion .....	270
<b>Therapeutic Uses of Low Temperature</b> , by FREDERICK M. ALLEN, M.D. ....	123
Discussion .....	129
Thermal Conditions and Heat Economy, The Influence of an Interior Coating of Aluminum Paper on Internal, by R. J. LORENZI, L. P. HERRINGTON, and C.-E. A. WINSLOW .....	339
Discussion .....	351
Thermometer—A New Instrument, The Sol-Air, by C. O. MACKEY and L. T. WRIGHT, JR. ....	271
Discussion .....	280
Thermocouples from the Effects of Radiation, The Shielding of, by GEORGE V. PARMELEE and RICHARD G. HUEBSCHER .....	183
Discussion .....	188
Transport Airplanes, Heating and Ventilating for, by B. M. BROD .....	131
Discussion .....	143
Tubes, The Effect of Turbulence Promoters on Heat Transfer Coefficients for Water Flowing in Horizontal, by LAWRENCE G. SEIGEL .....	197
Discussion .....	204
Turbulence Promoters on Heat Transfer Coefficients for Water Flowing in Horizontal Tubes, The Effect of, by LAWRENCE G. SEIGEL .....	197
Discussion .....	204
TUVE, G. L., Discussions on A Rational Basis for Solar Heating Analysis .....	323
Effect of Turbulence Promoters on Heat Transfer Coefficients for Water Flowing in Horizontal Tubes .....	204
Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy .....	351
Sol-Air Thermometer—A New Instrument .....	281

## U

URBANO, ARTHUR A., ARTHUR C. STERN, JACK BALIFF, ARTHUR E. PERINA, ROBERT CROWLEY, and BENJAMIN FEINER, Characteristics of Unit Dust Collectors .....	237
Discussion .....	257

## V

VALIQUET, H. H., Discussion on Energy Losses at Suction Hoods .....	233
VANDERWEIL, R. G., Discussion on A Single-Equation Design Procedure for Radiant Panel Systems .....	88

Ventilating Duct Systems, Effect of Branch Take-Off Design on Noise in, by OSCAR IMALIS, F. C. HOUGHTEN, and CLARK M. HUMPHREYS .....	145
Discussion .....	151
Ventilating for Transport Airplanes, Heating and, by B. M. BROD .....	131
Discussion .....	143
VITELES, MORRIS S., and KINSLEY R. SMITH, An Experimental Investigation of the Effect of Change in Atmospheric Conditions and Noise Upon Performance .....	167
Discussion .....	180

## W

Walls, Heat Losses Through Wetted, by E. C. WILLEY .....	297
Discussion .....	304
Walls or Roofs, Periodic Heat Flow—Composite, by C. O. MACKEY and L. T. WRIGHT, JR. ....	283
Discussion .....	293
Water Flowing in Horizontal Tubes, The Effect of Turbulence Promoters on Heat Transfer Coefficients for, by LAWRENCE G. SEIGEL .....	197
Discussion .....	204
Water from —160 to 212 F, Low-Pressure Properties of, by JOHN A. GOFF and S. GRATCH .....	95
Discussion .....	121
WIGGS, G. L., Discussion on A Rational Basis for Solar Heating Analysis .....	323
WIGGS, G. LORNE, Air Conditioning a Canadian Windowless Textile Mill .....	261
Discussion .....	270
WILLEY, E. C., Heat Losses Through Wetted Walls .....	297
Discussion .....	304
Windowless Textile Mill, Air Conditioning a Canadian, by G. LORNE WIGGS .....	261
Discussion .....	270
WINSLOW, C.-E. A., Discussions on Physiological Response of Subjects Exposed to High Effective Temperatures and Elevated Mean Radiant Temperatures Shielding of Thermocouples from the Effects of Radiation .....	164
WINSLOW, C.-E. A., R. J. LORENZI, and L. P. HERRINGTON, The Influence of an Interior Coating of Aluminum Paper on Internal Thermal Conditions and Heat Economy .....	188
Discussion .....	339
WITHERIDGE, W. N., Discussion on Energy Losses at Suction Hoods .....	351
WRIGHT, C. C., T. S. SPICER, and H. A. BAUMANN, Hold-Fire Controls for Bituminous Coal Stokers .....	234
Discussion .....	325
WRIGHT, L. T., JR., and C. O. MACKEY, Periodic Heat Flow—Composite Walls or Roofs .....	337
Discussion .....	283
WRIGHT, L. T., JR., and C. O. MACKEY, The Sol-Air Thermometer—A New Instrument .....	293
Discussion .....	271
	280

## Y

YAGLOU, C. P., Discussion on Therapeutic Uses of Low Temperature .....	129
--	-----

## Z

ZIEL, H. E., Discussion on Air Conditioning a Canadian Windowless Textile Mill .....	270
--	-----

